Title (en)

ULTRASOUND FINGERPRINT SENSING AND SENSOR FABRICATION

Title (de)

ULTRASCHALL-FINGERABDRUCKERFASSUNG UND SENSORHERSTELLUNG

Title (fr)

DÉTECTION D'EMPREINTES DIGITALES À ULTRASONS ET FABRICATION DE CAPTEURS

Publication

EP 3449419 A4 20190911 (EN)

Application

EP 18794708 A 20180409

Priority

- US 201762492875 P 20170501
- CN 2018082324 W 20180409

Abstract (en)

[origin: US2018314871A1] Disclosed are systems, devices and methods for providing fingerprint sensors based on ultrasound imaging techniques in electronic devices and fabrication techniques for producing ultrasound-based fingerprint sensors. In some aspects, an ultrasound fingerprint sensor device includes an intermediate layer coupled to a base chip including an integrated circuit having conducive contacts at a surface of the base chip, the intermediate layer including an insulation layer formed on the base chip and a corresponding array of channeling electrode structures coupled to the conductive contacts and passing through the insulation layer, in which the channeling electrodes terminate at or above a top surface of the insulation layer to provide bottom electrodes; a plurality of ultrasonic transducer elements including an acoustic transducer material coupled to the bottom electrodes; and a plurality of top electrodes positioned on the ultrasonic transducer elements.

IPC 8 full level

B06B 1/06 (2006.01); **G01S 7/52** (2006.01); **G01S 15/89** (2006.01); **G06K 9/00** (2006.01)

CPC (source: EP US)

B06B 1/0207 (2013.01 - US); **B06B 1/0607** (2013.01 - US); **B06B 1/0622** (2013.01 - EP US); **G01S 7/52079** (2013.01 - EP US); **G01S 15/8918** (2013.01 - EP US); **G01S 15/8925** (2013.01 - EP US); **G06V 40/1306** (2022.01 - EP US); **G06V 40/1376** (2022.01 - US); **H10N 30/072** (2023.02 - EP US); **H10N 30/082** (2023.02 - EP US); **H10N 30/088** (2023.02 - EP US); **H10N 30/302** (2023.02 - US); B06B 2201/70 (2013.01 - EP US); H10N 30/85 (2023.02 - US)

Citation (search report)

- [XY] CN 106412780 A 20170215 - NANCHANG OUFEI BIOLOGICAL IDENTIFICATION TECHNOLOGY CO LTD & US 2018068154 A1 20180308 - SUN WENSI [CN], et al
- [Y] US 2017059699 A1 20170302 - MATHE LENNART KARL-AXEL [US], et al
- [A] US 2013257224 A1 20131003 - WODNICKI ROBERT GIDEON [US], et al
- See references of WO 2018201853A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 11263422 B2 20220301; **US 2018314871 A1 20181101**; CN 109154986 A 20190104; CN 109154986 B 20201113; EP 3449419 A1 20190306; EP 3449419 A4 20190911; EP 3449419 B1 20211222; WO 2018201853 A1 20181108

DOCDB simple family (application)

US 201815968420 A 20180501; CN 2018082324 W 20180409; CN 201880001994 A 20180409; EP 18794708 A 20180409